ExxonMobil Baytown Olefins Plant
Application for Greenhouse Gas Prevention of Significant Deterioration Permit
Response to Additional Information Request

ExxonMobil received additional information requests on February 06, 2013 via email from Ms. Aimee Wilson. The questions are presented below followed by ExxonMobil's responses in *italics*.

1. The application states that a blended gas composed of natural gas and tail gas will be fired in the steam cracking furnaces. Where does the tail gas come from?

   Response:

   As stated the process description, (Section 2.2.3.3 of the application), the tail gas is produced from the demethanizer system. Please refer to the Process Flow Diagram submitted to the USEPA on November 14, 2012 for more details.

2. On the CCS costs, we will need some more specific data on how the cost of CCS would affect the overall cost of this project. I understand you may not want to release the cost of this project, but we need at least some statement to qualify the increase in cost. Will the addition of CCS increase the project cost by more than 50%? Does the addition of CCS double the project costs?

   Response:

   We are working on this response and will reply ASAP.

3. Decoking - Is there an automated process that detects the coke buildup? How are operators notified that a decoke needs to occur? Is there some sort of electronic process? Are the estimated emissions based on a number of decokes?

   Response:

   Decokes are planned based on historical furnace performance and operational/mechanical constraints. Timing and frequency depends on several factors including furnace tube pressure drop, furnace tube temperature, and safety considerations (e.g., force majeure or equipment malfunctions). These factors are monitored by operations personnel and/or by electronic means. The estimated emissions, both hourly and annual, are based on a combination of all these factors.

4. Staged flaring operation BACT - Was a VRU considered for treatment of the low flow streams? How will the heating value of the waste gas be monitored or measured? Is there a specific method that will be used?

   Response:

   The proposed project minimizes flaring by recovery of low flow streams to the process and/or to fuel. We consider this recovery integral to the proposed project design. We are not evaluating the costs of these types of design decisions using a BACT analysis. Examples of recovery to the process include separation of hydrocarbons from sour water, separation of hydrocarbons from caustic treating, and the stabilization of pyrolysis gas. Examples of recovery to fuel include tank vents from caustic treating and vents from wastewater treatment.

   Waste gas to the flares will be continuously monitored for flow. Additionally, the composition and heating value will be continuously determined by analyzers. Details of the flow monitoring and composition measurement methods will be included in the State NSR permit. We expect the requirements to be derived from 30 TAC 115 Subchapter H Division 1 (Highly Reactive Volatile Organic Compounds – Vent Gas Control).

5. Firewater Pump engines - what are the sizes of these engines?

   Response:

   The two firewater pump engines are 0.45 megawatts (600 horsepower) each.

6. Train 5 Duct Burners - How will the CO concentration be monitored or calculated to ensure compliance with the 7.4 ppmvd CO limit?

   Response:

   A Continuous Emissions Monitoring System (CEMS) is used to ensure compliance with the CO limit.

7. Will the generator engine and firewater pump engines be tested at the factory - or will onsite testing be performed as well for NSPS IIII?

   Response:

   The engines are not envisioned to be operated in "non-emergency" mode. Therefore, only factory testing as required by NSPS IIII is anticipated.